Amendments to the Claims:

Please cancel claims 1-12 and 14-29, and add claims 42-67, all as shown below.

1-33. (Canceled)

34. (Previously Presented) A method for shaping an optic, comprising:

placing an optic workpiece in a plasma processing chamber including an inductively-coupled plasma (ICP) torch having an outer tube to communicate a plasma gas to a distal end of the plasma torch, a coil surrounding the distal end of the outer tube, and an inner tube nested within the outer tube to communicate a reactive precursor to the distal end;

translating at least one of the optic workpiece and the plasma torch; and

communicating the plasma gas to the distal end;

generating a plasma discharge by applying current from a radio frequency (RF) power source to the coil to excite the plasma gas, wherein a plasma sheath is formed between the distal end and the plasma discharge; and

introducing the reactive precursor to the plasma discharge through the inner tube to generate a reactive species; and

shaping the surface of the optic workpiece using the reactive species within the plasma discharge;

controlling a distribution of reactive species within the plasma discharge; and

directing the plasma discharge to a target portion of the surface of the optic workpiece.

35-41. (Canceled)

42. (New) The method for shaping an optic of claim 34, wherein the step of shaping the surface of the optic workpiece comprises causing minimal or no damage to the optic workpiece underneath the surface.

43. (New) The method for shaping an optic of claim 34, wherein the step of shaping the surface of the optic workpiece comprises removing material from the surface of the optic workpiece.

44. (New) The method for shaping an optic of claim 34, further comprising:

rotating the optic workpiece with respect to the plasma torch.

45. (New) The method for shaping an optic of claim 34,, wherein the step of the plasma discharge includes directing the reactive species to the target portion.

46. (New) The method for shaping an optic of claim 34,, further comprising:
placing the reactive precursor in a central channel of the plasma torch.

47. (New) The method for shaping an optic of claim 34, further comprising:
using an argon gas as the plasma gas.

48. (New) The method for shaping an optic of claim 34, further comprising:
controlling the mass flow of the reactive precursor into the plasma torch.

49. (New) The method for shaping an optic of claim 34, further comprising:
controlling the mass flow of the reactive precursor into the plasma torch from between about 0 ml/min to about 2,000 ml/min.

50. (New) The method for shaping an optic of claim 34, further comprising:
controlling the mass flow of the reactive precursor into the plasma torch from between about 0 ml/min to about 50,000 ml/min.

51. (New) The method for shaping an optic of claim 34, further comprising:
selecting a concentration of the reactive precursor to be introduced into the plasma discharge.

52. (New) The method for shaping an optic of claim 34, further comprising:
coupling the RF energy to the plasma discharge in an annular region of the plasma torch.

53. (New) The method for shaping an optic of claim 34, wherein the plasma torch includes an intermediate tube arranged between the outer tube and the inner tube, the method further comprising:
introducing an auxiliary gas into the intermediate tube.

54. (New) The method for shaping an optic of claim 53, further comprising:

using the auxiliary gas to keep the plasma discharge away from the inner tube.

55. (New) The method for shaping an optic of claim 53, further comprising:
using the auxiliary gas to adjust the position of the plasma discharge relative to the distal end.

56. (New) The method for shaping an optic of claim 34, further comprising:
controlling the size of the plasma discharge by selecting the inner diameter of an outer tube of the plasma torch.

57. (New) The method for shaping an optic of claim 34, further comprising:
communicating the plasma gas to the outer tube tangentially to form a vortex.

58. (New) The method for shaping an optic of claim 34, further comprising:
metering the precursor and/or the plasma gas flow in the plasma torch.

59. (New) The method for shaping an optic of claim 34, further comprising:
maintaining the temperature of the plasma torch between 5,000 and 15,000 degrees C.

60. (New) The method for shaping an optic of claim 34, further comprising:
producing a volatile reaction product on the surface of the optic workpiece.

61. (New) The method for shaping an optic of claim 34, further comprising:
maintaining the processing chamber at about atmospheric pressure.

62. (New) The method for shaping an optic of claim 34, further comprising:
cleaning the surface of the optic workpiece with the plasma torch.

63. (New) The method for shaping an optic of claim 34, further comprising:
polishing the surface of the optic workpiece with the plasma torch.

64. (New) The method for shaping an optic of claim 34, further comprising:

planarizing the surface of the optic workpiece with the plasma torch.

65. (New) The method for shaping an optic of claim 34, further comprising:
using a plasma torch with a multiple head to increase an etch rate of the plasma torch.

66. (New) The method for shaping an optic of claim 34, further comprising:
using the precursor to control an etch rate of the plasma torch.

67. (New) The method for shaping an optic of claim 66, wherein:
the precursor is any one of a solid, liquid, and gas.